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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/632,311

07/30/2003

Marc A. Viredaz

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12/01/2005

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EXAMINER

WALLING, MEAGAN S

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,311

Applicant(s)

VIREDAZ ET AL.

Examiner

Meagan S. Walling

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2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-12, 14-19, 21-24 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 7, 13, 20, 25 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-6, 8-12, 14-19, 21-24, and 26-28 are finally rejected under 35 U.S.C. 102(e) as being anticipated by Friedrich et al. (US 2003/0193777).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Friedrich et al. teaches determining a workload within a data center (par. 32); determining an amount of heat being generated as a function of the workload (par. 32); and activating each of a plurality of different types of cooling resources within the data center in an optimal fashion based on the heat being generated (par. 21).

Regarding claim 2, Friedrich et al. teaches that the optimal fashion is based on a cost associated with the activation of each of the plurality of different cooling resources (par. 33).

Regarding claim 3, Friedrich et al. teaches deactivating one or more of the activated plurality of different types of cooling resources within the data center based on a reduction in the amount of power being consumed by the workload (par. 35).

Regarding claim 4, Friedrich et al. teaches that the amount of heat being generated is a function of an amount of power being consumed by the data center (par. 5).

Regarding claim 5, Friedrich et al. teaches that the cooling resources has a cooling capability wherein the cooling capability is a function of an amount of heat that can be removed by the cooling resource and the act of activating each of a plurality of different cooling resources in an optimal fashion further comprises; activating each of a plurality of different cooling resources based on the amount of heat that can be removed by each of the plurality of cooling resources (par. 35).

Regarding claim 6, Friedrich et al. teaches that the plurality of cooling resources comprises an air-based cooling resource, a liquid-based cooling resource, and a gas-based cooling resource (par. 5).

Regarding claim 8, Friedrich et al. teaches means for determining a workload within a data center (par. 32); means for determining an amount of heat being generated as a function of the workload (par. 32); and means for activating each of a plurality of different types of cooling resources within the data center in an optimal fashion based on the heat being generated (par. 21).

Regarding claim 9, Friedrich et al. teaches means for deactivating one or more of the activated plurality of different types of cooling resources within the data center based on a reduction in the amount of heat being generated (par. 35).

Regarding claim 10, Friedrich et al. teaches that the amount of heat being generated is a function of an amount of power being consumed by the data center (par. 5).

Regarding claim 11, Friedrich et al. teaches that the cooling resources has a cooling capability wherein the cooling capability is a function of an amount of heat that can be removed by the cooling resource and the means for activating each of a plurality of different cooling resources in an optimal fashion further comprises; means for activating each of a plurality of different cooling resources based on the amount of heat that can be removed by each of the plurality of cooling resources (par. 35).

Regarding claim 12, Friedrich et al. teaches that the plurality of cooling resources comprises an air-based cooling resource, a liquid-based cooling resource, and a gas-based cooling resource (par. 5).

Regarding claim 14, Friedrich et al. teaches a global computer system (par. 14); a plurality of different cooling resources coupled to the global computer system (Ref. 115); a cooling resource control module coupled to the global computer system and the plurality of different cooling resources (Ref. 130) wherein the cooling resource control module includes logic for: determining a workload within the global computer system (par. 32); determining an amount of heat being generated as a function of the workload (par. 32); and activating each of a plurality of different types of cooling resources coupled to the global computer system in an optimal fashion based on the amount of heat being generated (par. 21).

Regarding claim 15, Friedrich et al. teaches that the optimal fashion is based on a cost associated with the activation of each of the plurality of different cooling resources (par. 33).

Regarding claim 16, Friedrich et al. teaches deactivating one or more of the activated plurality of different types of cooling resources within the data center based on a reduction in the amount of heat being generated (par. 35).

Regarding claim 17, Friedrich et al. teaches that an amount of heat being dissipated by the global computer system is a function of an amount of power being consumed by the global computer system (par. 5).

Regarding claim 18, Friedrich et al. teaches that the plurality of cooling resources has a cooling capability wherein the cooling capability is a function of an amount of heat that can be removed by the cooling resource and the act of activating each of a plurality of different cooling resources in an optimal fashion further comprises; activating each of a plurality of different cooling resources based on the amount of heat that can be removed by each of the plurality of cooling resources (par. 35).

Regarding claim 19, Friedrich et al. teaches that the plurality of cooling resources comprises an air-based cooling resource, a liquid-based cooling resource, and a gas-based cooling resource (par. 5).

Regarding claim 21, Friedrich et al. teaches determining a workload within a global computer system (par. 32); determining an amount of heat being generated as a function of the workload (par. 32); and activating each of a plurality of different types of cooling resources coupled to the global computer system in an optimal fashion based on the amount of heat being generated (par. 21).

Regarding claim 22, Friedrich et al. teaches that the optimal fashion is based on a cost associated with the activation of each of the plurality of different cooling resources (par. 33).

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Regarding claim 23, Friedrich et al. teaches deactivating one or more of the activated plurality of different types of cooling resources within the data center based on a reduction in the amount of heat being generated (par. 35).

Regarding claim 24, Friedrich et al. teaches that the plurality of cooling resources comprises an air-based resource, a liquid-based cooling resource, and a gas-based cooling resource (par. 5).

Regarding claim 26, Friedrich et al. teaches determination logic for: determining a workload within a data center (par. 32); and determining an amount of heat being generated as a function of the workload (par. 32); and activation logic for activating each of a plurality of different types of cooling resources within the data center in an optimal fashion based on the amount of heat being generated (par. 21).

Regarding claim 27, Friedrich et al. teaches deactivating one or more of the activated plurality of different types of cooling resources within the data center based on a reduction in the amount of heat being generated (par. 35).

Regarding claim 28, Friedrich et al. teaches that the plurality of different types of cooling resources comprise an air-based cooling resource, a liquid-based cooling resource, and a gas-based cooling resource (par. 5).

Allowable Subject Matter

2. Claims 7, 13, 20, 25, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the indication of allowability of claims 7, 13, 20, 25, and 29 is the inclusion of the limitations of activating and means for activating the air-based cooling resource before the liquid-based cooling resource and the gas-based cooling resource; and activating and means for activating the liquid-based cooling resource before the gas-based cooling resource. It is this limitation in the claimed combination that has not been found, taught, or suggested in the prior art that makes these claims allowable.

Response to Arguments

Applicant's arguments filed 9/13/05 have been fully considered but they are not persuasive.

Applicant argues that Friedrich (US 2003/0193777) does not teach activating each of a plurality of different types of cooling resources within the data center in an optimal fashion based on the heat being generated. As stated in paragraph 21 and summarized in applicant's response, Friedrich does teach a variety of different cooling elements. However, applicant asserts that these "cooling elements" make up a single "cooling resource."

Although it is noted that in the present application the specification makes reference to different cooling resources comprising, for example, air-based cooling, liquid-based cooling, and gas-based cooling, the independent claims do not recite these specific limitations. Therefore, Friedrich teaches the independent claims as written when, for example, different cooling resources such as cooling vents, the fan, the cooling coil, the compressor, the condenser, and various other air-conditioning elements are taught in paragraph 21.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

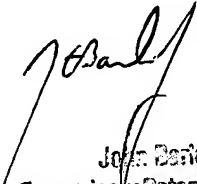
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meagan S. Walling whose telephone number is (571) 272-2283. The examiner can normally be reached on Monday through Friday 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

msw



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